



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,178	12/20/2001	John Joseph Sayovitz	14247	9478
23556	7590	04/21/2004	EXAMINER	
KIMBERLY-CLARK WORLDWIDE, INC. 401 NORTH LAKE STREET NEENAH, WI 54956			PURVIS, SUE A	
			ART UNIT	PAPER NUMBER
			1734	

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/026,178	SAYOVITZ ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sue A. Purvis	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 14-17 and 22-25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 8 is objected to because of the following informalities: In line 1 of the claims, applicant states "hot melt adhesive is appli d", it should be --hot melt adhesive is applied--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 5, 10, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Varona (US Patent No. 6,150,002).

Varona discloses a thermoplastic nonwoven web (12), the web is coated with a hydrophobic adhesive (35), such as a polyamide, which is a known hot melt adhesive, and placed in contact with a creping station (30). Creping blade (38) removes the web from the roll (36) creating a creped nonwoven web. The web in Varona is disclosed as being with a web pattern of interfiber bonds. (Col. 2, lines 8-28; Col. 5, lines 61-67; Col. 6, lines 1-11; Col. 7, lines 11-20). Page 13, lines 15-18 of applicant's specification list polyamide as an example of a hot melt adhesive used.

Regarding claim 4, Varona shows placing the adhesive on the web prior to contact with the roll.

Art Unit: 1734

Regarding claim 5, Varona uses 'printing'.

Regarding claims 10, Varona uses a smooth roll in combination with the creping blade (38).

Regarding claim 13, the adhesive in Varona is hydrophobic.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varona as applied to claim 1 above, and further in view of Becker et al. (US Patent No. 4,158,594).

Varona does not disclose placing the hot melt adhesive on the roll.

Becker discloses that the method of placing the adhesive on the fabric and the roll are both known in the art and are functionally equivalent alternative expedients. (Figures 2 and 3; Col. 7, lines 49-55.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to place the adhesive onto the roll rather than the fabric in Varona based on the teachings of Becker.

Regarding claim 3, printing, spraying, and dipping are all well known methods of placing creping adhesive on rollers.

Art Unit: 1734

6. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varona in view of the Handbook of Adhesives and Sealants (hereinafter "Adhesive Handbook") and Modern Plastics Handbook (hereinafter "Plastics Handbook")

Varona does not disclose at the melting point of the adhesive used.

In the Adhesive Handbook, it is discussed that polyamide hot melt adhesives have lower melting points than the polyamides used for engineering plastics (nylon). It is also disclosed that they can be varied to provide hot melts of almost any desired temperature over a span of several hundred degrees. Table 10.20 which shows a general comparison of Hot-Melt Adhesives does not list a melting point, only a softening point of 100°C.

In the Plastics Handbook, Appendix C lists the important properties of plastics. Polyamides are shown to have a melting point between 125 and 300 °C depending on the type of polyamide.

It would have been obvious to one having ordinary skill in the art at the time the invention was made that the polyamide adhesive used in Varona to have a melting point between 60 and 125 °C based on the teachings in Adhesive Handbook and Plastics Handbook. The Adhesive Handbook states that the polyamide adhesives have a lower melting point than polyamides in nylon form and the Plastics Handbook gives a melting point of various polyamides in nylon form which are slightly higher than the claimed range with only nylon-12 being in the claimed range. (See page C.27.) Based on the teachings in the Adhesive Handbook it is within the purview of the artisan to have the polyamide hot-melt adhesive be in the claimed melting point range, because the melting point range in the Plastics Handbook is only slightly above that claimed range.

7. Claims 8, 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varona as applied to claim 1 above, and further in view of Anderson et al. (US Patent No. 6,315,864 B2).

Art Unit: 1734

The examples in Varona discuss the application of a single adhesive and disclose a wet pickup of 1 to 3%. However, Varona teaches applying adhesive to both sides of the web and does not go into detail on what the weight percent of the adhesive would be when applied to both sides.

Anderson teaches that the bonding agent is preferably in the range of 2 to about 10% by weight. (Col. 12, lines 45-46.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made that the bonding agent for creping the web in Varona would remain within the range claimed by the applicant, because it is within the purview of the artisan to keep the amount of adhesive on the second side in the same range as that applied to the first side. Furthermore, Anderson discloses a preferred range for total adhesive used.

Regarding claims 11 and 12, the creping cylinder (36) in Varona can be a dryer roller, but there is no discussion of the temperature of the roller. Anderson teaches using a drum (60) which can be at ambient temperature or heated for partially drying the web. (Col. 11, lines 38-40). It would have been obvious to one having ordinary skill in the art at the time the invention was made that the temperature of the roll whether it be at ambient temperature or above ambient temperature is within the purview of the artisan, because Anderson teaches that controlling the temperature of the creping roller is known in the art.

8. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varona in view of the Adhesive Handbook.

Varona discloses a thermoplastic nonwoven web (12), the web is coated with a hydrophobic adhesive (35), such as a polyamide, which is a known hot melt adhesive, and placed in contact with a creping station (30). Creping blade (38) removes the web from the roll (36) creating a creped nonwoven web. The web in Varona is disclosed as being with a web pattern of interfiber bonds. (Col. 2, lines 8-28; Col. 5, lines 61-67; Col. 6, lines 1-11;

Art Unit: 1734

Col. 7, lines 11-20). Page 13, lines 15-18 of applicant's specification list polyamide as an example of a hot melt adhesive used.

The Adhesive Handbook discloses it is well known when using polyamides as adhesives, that those polyamides include additives. (See Page 407.) Applicants own disclosure details that the adhesive additive's only requirement is that the additive be compatible with the thermoplastic polymer and withstand the high processing temperatures.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include an adhesive additive in the polyamide hot melt adhesive in Varona, because the Adhesive Handbook teaches it is known in the art to include an additive in polyamide hot melt adhesive.

Regarding claim 19, Varona uses a smooth roll in combination with the creping blade (38).

9. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varona in view of the Adhesive Handbook as applied to claim 18 above, and further in view of Anderson et al.

The creping cylinder (36) in Varona can be a dryer roller, but there is no discussion of the temperature of the roller.

Anderson teaches using a drum (60) which can be at ambient temperature or heated for partially drying the web. (Col. 11, lines 38-40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made that the temperature of the roll whether it be at ambient temperature or above ambient temperature is within the purview of the artisan, because Anderson teaches that controlling the temperature of the creping roller is known in the art.

***Response to Arguments***

10. Applicant's arguments filed 05 February 2004 have been fully considered but they are not persuasive.

11. Applicant argues that Varona contains no teaching leading to the use of hot melt adhesive and that the examples as well as the claims describe the use of latex adhesives. The examiner disagrees with applicant's interpretation of Varona. The teachings of Varona cannot be limited by the examples or the claims. The examples only discuss creping one side, but Varona clearly teaches creping of both sides of the web. The claims also appear only to discuss creping of one side of the web. Furthermore, Varona clearly discloses "polyamide" as an example of a hydrophobic adhesive used to crepe a second side of the web. "Polyamide" is a well-known hot melt adhesive and the examiner has included further references to support that.

12. Applicant also argues that Varona teaches the use of a dryer drum (36) which would lead to the adhesive used in Varona not being a hot melt adhesive. However, there is no indication that when creping with hot melt adhesives a dryer drum would never be used. Anderson teaches using a drying step even though the creping is done using hot melt adhesive, stating that hot melt adhesive may alleviate the need for a drying step, but does not teach that a drying step would be necessarily eliminated.

***Allowable Subject Matter***

13. Claims 14-17 and 22-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. The following is an examiner's statement of reasons for allowance: Prior art does not teach or suggest creping a nonwoven fibrous web with a web bond pattern of interfiber



Art Unit: 1734

bonds on both sides using a hot melt adhesive as set forth in claim 14. Anderson discloses creping on both sides using a hot melt adhesive, but has no teaching for doing so with a nonwoven fibrous web with a web bond pattern of interfiber bonds. Anderson specifically teaches away from such a nonwoven web. Varona discloses using a nonwoven fibrous web with a web bond pattern of interfiber bonds, but only one side is creped using a hot melt adhesive, the other side is creped with a hydrophilic latex adhesive. There is no reason or suggestion for using a hot melt adhesive on both sides in Varona.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

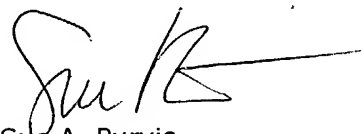
### ***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue A. Purvis whose telephone number is (571) 272-1236. The examiner can normally be reached on Monday through Friday 9am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rick Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1734

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sue A. Purvis  
Examiner  
Art Unit 1734

SP  
April 18, 2004